



Safety Data Sheet (SDS) According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

Issuing Date: 2018-01-19

Version: 1

SECTION 1. Identification

Product identifier

Product No 7792
Product name PathScan® Phospho-AMPK-alpha (Thr172) Chemiluminescent Sandwich ELISA Kit
Kit Component Luminol/Enhancer Solution
Stable Peroxide Buffer
ELISA Wash Buffer (20X)
ELISA Sample Diluent
PathScan® Sandwich ELISA Lysis Buffer (1X)

When supplied with lyophilized antibodies:
Green Detection Antibody (Lyophilized)
Green Detection Antibody Diluent
*Red HRP-Linked Antibody (Lyophilized)
Red HRP Diluent

When supplied with liquid antibodies:
Green Detection Antibody (Liquid)
*Red HRP-Linked Antibody (Liquid)

***Note:** Some PathScan® ELISA Kits may include HRP-Linked Streptavidin in place of HRP-Linked Antibody.

Recommended use of the chemical and restrictions on use

Identified uses This product is intended for research purposes only.
Manufacturer, importer, supplier

Manufacturer address Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
United States
TEL: +1 978 867 2300
FAX: +1 978 867 2400
Website www.cellsignal.com
Email address support@cellsignal.com
Emergency telephone number In case of emergency call CHEMTREC 1-800-424-9300

SECTION 2. Hazard(s) identification

Classification

This substance/mixture is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1

GHS Label elements, including precautionary statements**Signal Word**

Warning

Hazard statement(s)

Causes serious eye irritation. May cause an allergic skin reaction.

Precautionary Statement(s)

Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Dispose of contents/container to an approved waste disposal plant.

Supplementary Hazard Information

May produce an allergic reaction

Hazards not otherwise classified (HNOC)

Not applicable.

SECTION 3. Composition/information on ingredients
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Kit Component Name Luminol/Enhancer Solution

Chemical Name	CAS No	Weight %
trometamol	77-86-1	1-3
Ethylene glycol	107-21-1	1-3

Kit Component Name ELISA Wash Buffer (20X)

Chemical Name	CAS No	Weight %
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	0.005-0.025

Kit Component Name ELISA Sample Diluent

Chemical Name	CAS No	Weight %
sodium azide	26628-22-8	<0.1

Kit Component Name PathScan® Sandwich ELISA Lysis Buffer (1X)

Chemical Name	CAS No	Weight %
polyethylene glycol	9002-93-1	1
p-(1,1,3,3-tetramethylbutyl)phenylether		
tetrasodium pyrophosphate, decahydrate	13472-36-1	0.06

Kit Component Name		Green Detection Antibody Diluent	
Chemical Name	CAS No	Weight %	
trometamol	77-86-1	0.5	
sodium azide	26628-22-8	<0.1	

Kit Component Name		Red HRP Diluent	
Chemical Name	CAS No	Weight %	
trometamol	77-86-1	0.5	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	0.005-0.025	

Kit Component Name		Green Detection Antibody (Liquid)	
Chemical Name	CAS No	Weight %	
trometamol	77-86-1	0.5	
sodium azide	26628-22-8	<0.1	

Kit Component Name		*Red HRP-linked Antibody (Liquid)	
Chemical Name	CAS No	Weight %	
trometamol	77-86-1	0.5	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	0.005-0.025	

Kit Component Name Green Detection Antibody (Lyophilized); *Red HRP-Linked Antibody (Lyophilized); Stable Peroxide Buffer

This product does not contain substances at concentrations requiring disclosure under 29 CFR 1910.1200 (OSHA Hazard Communication Standard).

SECTION 4. First-aid measures

Eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.
Ingestion	Get medical attention. Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Contains kit components which may cause the following effects, refer to individual component SDSs for full information on symptoms:

Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Contains an animal derived biological. May produce an allergic reaction in susceptible individuals. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Advice for emergency responders

General advice	For further assistance, contact your local Poison Control Center.
Protection of first-aiders	Avoid contact with skin, eyes and clothing.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Avoid contact with skin, eyes and clothing. Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Do not allow material to contaminate ground water system. Should not be released into the environment. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal. Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.

SECTION 7. Handling and storage

Precautions for safe handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Avoid breathing vapors or mists. Refer to Section 8.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep away from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place.

Packaging material No information available.

Incompatible products Strong oxidizing agents, strong acids, and strong bases.

SECTION 8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values			
Chemical Name	ACGIH TLV	OSHA PEL	NIOSH REL
Ethylene glycol	Ceiling: 100 mg/m ³	-	-
sodium azide	Ceiling: 0.29 mg/m ³ Ceiling: 0.11 ppm	-	Ceiling: 0.1 ppm Ceiling: 0.3 mg/m ³
tetrasodium pyrophosphate, decahydrate	-	-	TWA : 5 mg/m ³

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

Eye/face protection

Tightly fitting safety goggles.

Skin and body protection

Lightweight protective clothing. Impervious gloves.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures

Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

SECTION 9. Physical and chemical properties

Information on the known physical chemical properties of each component within Kit are given below. If not included, information is either not available or not applicable. Refer to individual kit component SDS for further information.

Information on basic physical and chemical properties**Kit Component**

Physical state

Appearance

Color

pH VALUE

Remarks

Solubility

Luminol/Enhancer Solution

Liquid

Clear

Colorless or light pink

9.5

@ 20 °C

Soluble in water

Kit Component

Physical state

Appearance

Color

pH VALUE

Remarks

Stable Peroxide Buffer

Liquid

Clear

Colorless

4.9-5.1

@ 20 °C

Kit Component

Physical state

Appearance

Color

pH VALUE

Remarks

ELISA Wash Buffer (20X)

Liquid

Clear

Colorless

6.4

@ 20 °C

Kit Component

Physical state

ELISA Sample Diluent

Liquid

Appearance	Clear
Color	Blue
pH VALUE	7.1
Remarks	@ 20 °C
Kit Component	PathScan® Sandwich ELISA Lysis Buffer (1X)
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH VALUE	7.5
Remarks	@ 20 °C
Kit Component	Green Detection Antibody (Lyophilized)
Physical state	Solid
Appearance	Lyophilized Powder
Color	Green
Kit Component	Green Detection Antibody Diluent
Physical state	Liquid
Appearance	Clear
Color	Green
pH VALUE	7.4
Remarks	@ 20 °C
Kit Component	*Red HRP-Linked Antibody (Lyophilized)
Physical state	Solid
Appearance	Lyophilized Powder
Color	Red
Kit Component	Red HRP Diluent
Physical state	Liquid
Appearance	Clear
Color	Red
pH VALUE	7.4
Remarks	@ 20 °C
Kit Component	Green Detection Antibody (Liquid)
Physical state	Liquid
Appearance	Clear
Color	Green
pH VALUE	7.4
Remarks	@ 20 °C
Kit Component	*Red HRP-Linked Antibody (Liquid)
Physical state	Liquid
Appearance	Clear
Color	Red
pH VALUE	7.4
Remarks	@ 20 °C

SECTION 10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions None under normal processing.
Hazardous polymerization None under normal processing.

Conditions to Avoid

Extremes of temperature and direct sunlight. Exposure to air or moisture over prolonged periods. Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of the HIGHLY EXPLOSIVE compounds of lead azide & copper azide.

Incompatible Materials

Strong oxidizing agents, strong acids, and strong bases.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

SECTION 11. Toxicological information**Information on likely routes of exposure****Product Information**

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

Inhalation

Kit Component Inhalation	Luminol/Enhancer Solution Avoid breathing vapors or mists May cause irritation of respiratory tract
Kit Component Inhalation	Stable Peroxide Buffer May cause irritation of respiratory tract
Kit Component Inhalation	ELISA Wash Buffer (20X) Avoid breathing vapors or mists May cause irritation of respiratory tract
Kit Component Inhalation	Green Detection Antibody (Lyophilized) May cause allergic respiratory reaction
Kit Component Inhalation	*Red HRP-Linked Antibody (Lyophilized) May cause allergic respiratory reaction
Kit Component Inhalation	Red HRP Diluent Avoid breathing vapors or mists May cause irritation of respiratory tract

Eye contact

Kit Component Eye contact	ELISA Wash Buffer (20X) Luminol/Enhancer Solution Avoid contact with eyes
Kit Component Eye contact	Stable Peroxide Buffer Expected to be an irritant based on components May cause slight irritation
Kit Component Eye contact	ELISA Wash Buffer (20X) Expected to be an irritant based on components
Kit Component Eye contact	PathScan® Sandwich ELISA Lysis Buffer (1X) Expected to be an irritant based on components

Kit Component	Red HRP Diluent
Eye contact	Contact with eyes may cause irritation

Skin contact

Kit Component	Luminol/Enhancer Solution
Skin contact	Avoid contact with skin
Kit Component	Stable Peroxide Buffer
Skin contact	Substance may cause slight skin irritation
Kit Component	ELISA Wash Buffer (20X)
Skin contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons Expected to be an irritant based on components
Kit Component	Green Detection Antibody (Lyophilized)
Skin contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons
Kit Component	*Red HRP-Linked Antibody (Lyophilized)
Skin contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons
Kit Component	Red HRP Diluent
Skin contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

Ingestion

Kit Component	Luminol/Enhancer Solution
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea
Kit Component	Stable Peroxide Buffer
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea
Kit Component	ELISA Wash Buffer (20X)
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Information on toxicological effects**Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
trometamol	5900 mg/kg (Rat)	-	-
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	= 1800 mg/kg (Rat)	-	-
sodium azide	= 27 mg/kg (Rat)	= 20 mg/kg (Rabbit) = 50 mg/kg (Rat)	-
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	= 53 mg/kg (Rat) = 481 mg/kg (Rat)	-	= 1.23 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Symptoms**

Contains kit components which may cause the following effects, refer to individual component SDSs for full information on symptoms:
Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes. Symptoms of overexposure may be headache, dizziness, tiredness,

nausea and vomiting. Contains an animal derived biological. May produce an allergic reaction in susceptible individuals Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

Skin and Eye Corrosion/Irritation

Kit Component	ELISA Wash Buffer (20X)
Skin corrosion/irritation	Irritating to skin
Serious eye damage/eye irritation	Causes serious eye irritation
Kit Component	PathScan® Sandwich ELISA Lysis Buffer (1X)
Serious eye damage/eye irritation	Causes serious eye irritation

Sensitization

Kit Component	ELISA Wash Buffer (20X)
Skin Sensitization	Product is or contains a sensitizer. May cause an allergic skin reaction.
Kit Component	Green Detection Antibody (Lyophilized)
Respiratory Sensitization	May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin Sensitization	May cause skin sensitization.
Kit Component	*Red HRP-Linked Antibody (Lyophilized)
Respiratory Sensitization	May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin Sensitization	May cause skin sensitization
Kit Component	Red HRP Diluent
Skin Sensitization	Product is or contains a sensitizer. May cause an allergic skin reaction.
Kit Component	*Red HRP-Linked Antibody (Liquid)
Skin Sensitization	Product is or contains a sensitizer. May cause an allergic skin reaction.

Mutagenic effects

No information available

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity

No information available.

Systemic Target Organ Toxicity (STOT)

Kit Component	Luminol/Enhancer Solution
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure
Target Organ Effects	Kidney

Aspiration Hazard

No information available.

SECTION 12. Ecological information

Ecotoxicity

Product Information

Ecotoxicity

Kit Component	ELISA Wash Buffer (20X)
Ecotoxicity	Harmful to aquatic life with long lasting effects

Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
trometamol	-	-	NOEC >100 mg/L (Selenastrum capricornutum) 96 h
Ethylene glycol	EC50 6500 - 13000 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 40761 mg/L (Oncorhynchus mykiss) 96 h LC50 27540 mg/L (Lepomis macrochirus) 96 h LC50 41000 mg/L (Oncorhynchus mykiss) 96 h LC50 14 - 18 mL/L (Oncorhynchus mykiss) 96 h LC50 40000 - 60000 mg/L (Pimephales promelas) 96 h LC50 16000 mg/L (Poecilia reticulata) 96 h	EC50 46300 mg/L (Daphnia magna) 48 h
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	-	LC50 8.9 mg/l (Pimephales promelas) 96 h	EC50 26 mg/l (Daphnia) 48 h
sodium azide	EC50 0.35 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 0.8 mg/L (Oncorhynchus mykiss) 96 h LC50 5.46 mg/L (Pimephales promelas) 96 h LC50 0.7 mg/L (Lepomis macrochirus) 96 h	LC100 1 mg/L (Orconectes rusticus) 96 h
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	EC50 0.11 - 0.16 mg/L (Pseudokirchneriella subcapitata) 72 h EC50 0.31 mg/L (Anabaena flos-aquae) 120 h EC50 0.03 - 0.13 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 1.6 mg/L (Oncorhynchus mykiss) 96 h	EC50 4.71 mg/L (Daphnia magna) 48 h EC50 0.71 - 0.99 mg/L (Daphnia magna) 48 h EC50 0.12 - 0.3 mg/L (Daphnia magna) 48 h

Persistence and degradability

Kit Component	ELISA Wash Buffer (20X)
Persistence and degradability	Not readily biodegradable

Bioaccumulation

Kit Component	ELISA Wash Buffer (20X)
Bioaccumulation	Not likely to bioaccumulate

Chemical Name	Octanol-Water Partition Coefficient
Ethylene glycol	-1.93

Mobility

Kit Component	ELISA Wash Buffer (20X)
Mobility	Will likely be mobile in the environment due to its water solubility

Other adverse effects

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SECTION 13. Disposal considerations**Waste Disposal Methods**

Should not be released into the environment.

Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way.

SECTION 14. Transport information

This material is not subject to regulation as a hazardous material for shipping.

SECTION 15. Regulatory information**North American Inventory Listing**

Refer to kit component SDS for full Toxic Substance Control Act (TSCA) reporting requirements.

Chemical Name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
trometamol	Listed	Not Listed	Listed	Not Listed
Ethylene glycol	Listed	Not Listed	Listed	Not Listed
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	Listed	Not Listed	Listed	Not Listed
sodium azide	Listed	Not Listed	Listed	Not Listed
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	Not Listed	Section 5: 1 %	Listed	Not Listed

SARA 313

Refer to kit component SDS for full SARA Section 313 reporting requirements.

Chemical Name	CAS No	SARA 313 - Threshold Values %
Ethylene glycol	107-21-1	1.0
sodium azide	26628-22-8	1.0
magnesium nitrate	10377-60-3	1.0
trisodium tetraoxovanadate	13721-39-6	1.0
copper dinitrate	3251-23-8	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Refer to kit component SDS for full Clean Water Act (CWA) reporting requirements.

CERCLA

Refer to kit component SDS for full Comprehensive Environmental Response Compensation and Liability Act (CERCLA) reporting requirements.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Ethylene glycol	5000 lb	Not Listed
sodium azide	1000 lb	1000 lb

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Refer to kit component SDS for applicable State Right-To-Know (RTK) information.

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethylene glycol	Listed	Listed	Listed
disodium hydrogenorthophosphate	Listed	Listed	Listed
sodium azide	Listed	Listed	Listed
sodium fluoride	Listed	Listed	Listed
tetrasodium pyrophosphate, decahydrate	Listed	Listed	Listed
magnesium nitrate	Listed	Listed	Listed
trisodium tetraoxovanadate	Listed	Not Listed	Not Listed
copper dinitrate	Listed	Listed	Listed

SECTION 16. Other information

Issuing Date: 2018-01-19

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet